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THE JOINT STAFF

THE JOINT CHIEFS OF STAFF  
WASHINGTON, D.C. 20301  
SPECIAL ASSISTANT FOR ARMS CONTROL (SAAC)

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PA/HO, Department of State  
E.O. 12958, as amended  
Date: 8/6/07

15 October 1969

MEMORANDUM FOR RECORD

Subject: Eighteenth Meeting of the NSC Under Secretaries  
Committee on Tuesday, 14 October 1969

1. Attending:

STATE:	MR. ELLIOT L. RICHARDSON, Under Secretary of State MR. ARTHUR A. HARTMAN, Staff Director, USC MR. HERMAN POLLACK, Director, International Scientific and Technological Affairs MR. NELSON S. SIEVERING, JR., Office of International Scientific and Technological Affairs MR. JOHN R. STEVENSON, Legal Advisor
CIA:	GENERAL ROBERT E. CUSHMAN, Deputy Director CIA MR. PETER JESSUP, Special Group Officer, CIA
DOD:	MR. DAVID PACKARD, Deputy Secretary of Defense
JCS:	GENERAL EARLE G. WHEELER, Chairman, JCS MAJOR GENERAL M. C. DEMLER, Special Assistant to the JCS for Arms Control
AEC:	DR. GLENN T. SEABORG, Chairman, AEC DR. THEOS J. THOMPSON, Member, AEC
BOB:	DR. JAMES R. SCHLESINGER, Assistant Director, BOB
NSC:	COLONEL ROBERT M. BEHR, Staff of NSC
WHITE HOUSE:	DR. HUBERT HEFFNER, Office of Science and Technology MR. DAVID FREEMAN, Office of Science and Technology
ACDA:	MR. GERARD SMITH, Director, ACDA

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GROUP - 3  
Downgraded at 12 yr  
Intervals; not  
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2. Agenda Item: Peaceful Nuclear Explosions and the Limited Test Ban Treaty

MR. RICHARDSON opened the meeting by stating that the subject of today's meeting was very complex. He asked Dr. Seaborg to describe the problems of (1) tests and information needed for nuclear explosions to excavate a proposed interoceanic canal, and (2) constraints of the Limited Test Ban Treaty (LTBT).

DR. SEABORG stated that he was pleased with the report of the study by the interagency group and the draft memorandum for the President on this subject. He explained that in the PLOWSHARE program there have been five cratering nuclear explosions which contributed information and only two more of a program of four tests were essential to determine feasibility of constructing the (transisthmian canal.

[REDACTED]

MR. RICHARDSON asked if these tests require amendment of the LTBT and if so is it realistic to proceed concurrently with tests and negotiations for an amendment.

DR. SEABORG responded that there is no question that we need the amendment, but it would take years to negotiate. From his talks with the Soviets, it was not clear that they would agree because they can perform nuclear explosive excavations without an amendment. However, small central American countries present a fall-out problem for us.

GENERAL WHEELER stated he understood that the AEC had studies going to determine standards for health and safety in order to proceed with LTBT amendment.

MR. RICHARDSON felt that the concurrent route of tests and negotiation of amendment would not get anywhere. He then asked for discussion to justify the two new tests proposed in PLOWSHARE with a comparison of detectable amounts of fall-out from the previous SCHOONER test at [REDACTED] yield. What did we say to Soviets about the results?

DR. SEABORG responded that the Soviet Union charge of a US violation was answered by our explanation that it was a negligible amount. Also, the United States queried the Soviet Union on three of their explosions detected by the United States and asked for explanations.

MR. PACKARD asked if Canada had any official question on radioactive detection of US tests.

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DR. SEABORG explained that Canada had not questioned the United States and their Foreign Secretary reported to Parliament that their Public Health Stations could not attribute radioactive debris to our SCHOONER test. However, our AFTAC did detect and verify the SCHOONER test radioactivity at 1-to-2 picocuries per cubic meter of air near the US border. (1 picocurie = one millionth of one millionth of a curie.)

MR. RICHARDSON inquired as to the range of radioactivity level in the atmosphere from nuclear weapons tests before the LTBT (1963) and after.

DR. SEABORG and AEC staff indicated that this level was 10 picocuries one year after the LTBT and is now down to 1 picocurie.

MR. RICHARDSON proposed several approaches to the problem (radioactivity detection of PLOWSHARE tests at our borders):

1. It may be a technical violation but does not amount to anything.

2. It is not a violation although detectable in the context of atmospheric tests banned by the LTBT.

MR. SMITH of ACDA stated there was more concern over the public image of the United States than in the technical facts related to the problem; therefore, AEC should get the data from studies and tests.

MR. RICHARDSON asked what level of radioactivity after a nuclear explosion is tolerable under the LTBT. (There followed a discussion between lawyers present covering international law, relief provisions in treaties, rules for interpreting treaties, and legislative history including AEC testimony to the US Senate on the LTBT.)

DR. SEABORG stated that he tried hard in his Senate testimony on the LTBT to prove that we could conduct PLOWSHARE tests under the treaty.

MR. PACKARD asked what was our resolution capability for radioactivity in the atmosphere at our borders.

DR. SEABORG responded that with laboratory equipment we now could detect "one atom in a room this size" or one ten-thousandth of a picocurie whereas in 1963 we could detect only 100 times that amount of radioactivity.

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MR. SMITH stated that the problem is political, the LTBT prohibition ("radioactive debris present outside the territorial limits of the State") is clearly "detectable," we should avoid any legal argument, and go ahead with AEC tests.

MR. PACKARD inquired as to the status of Soviet Union tests.

DR. SEABORG stated that the Soviet Union program of future tests has already been accomplished. High levels of radioactivity have been detected in Japan with Public Health Stations reporting up to 70 picocuries.

MR. PACKARD proposed that if levels (of radioactivity) are kept low AEC should proceed with studies and test program for canal excavation and then assess the next step (LTBT amendment) with adequate data.

MR. HEFFNER asked why are we doing the canal excavation, why amend the LTBT with the rising public concern in the area of nuclear tests and the budgetary bind, and why are not these PLOWSHARE tests postponable?

DR. SEABORG explained that the STURTEVANT test has already been paid for and two tests are required for the canal study commission next year.

MR. SMITH observed that if an LTBT amendment is needed it would take a decade and if time is urgent, AEC tests should proceed

DR. SEABORG added that under the Nonproliferation Treaty (NPT) the United States is expected to assist nonnuclear countries with nuclear explosion excavations based on PLOWSHARE program. If we do not help them, this gives countries an excuse to develop their own nuclear explosives for excavation. Also, the Soviet Union may give their services to other countries, notably Latin-American.

MR. SMITH and AEC staff members then discussed relative cost of nuclear explosions versus conventional means for excavating an interoceanic canal with an indication that at present the nuclear explosion method was cheaper by a half-billion dollars.

MR. PACKARD felt that the government should not let dissident hold up scientific and technical progress, we should get on with testing, and find out what can be done.

MR. RICHARDSON asked about the political issues involved, and a true public concern over recent tests (RULISON and MILROW) plus other tests in prospect. He observed that these tests may tend to draw down public tolerance of weapons tests (underground), wouldn't they? Dr. Seaborg responded simply by saying "yes."

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MR. PACKARD asked and was informed by AEC that the STURTEVANT test was planned for next month and the next MILROW test in one year.

MR. SMITH was informed by AEC staff that the column of debris from the SCHOONER test was visible to 16,000 feet in height.

MR. RICHARDSON referred to the White House memorandum (19 May 1969) requesting the views of the Committee and to the draft memorandum for the President (prepared by the Department of State). He discussed the importance of the STURTEVANT test for entire PLOWSHARE program, as well as canal excavation, bilateral technical meetings with the Soviet Union and the need for AEC laboratory tests to LTBT interpretation or amendment. Interagency agreement was reached on the following course of action:

a. The AEC will promptly complete the development of the data necessary to establish objective criteria for acceptable levels of radioactivity;

b. The Interagency Study Group will 1) examine the AEC study with a view of determining whether the data can be used as the basis of establishing acceptable objective criteria and 2) prepare further detailed recommendations for consideration by the Under Secretaries Committee regarding the amendment approach to modification of the LTBT and interim procedures. (Tentative deadline established of March 1, 1970); and

c. Resumption of bilateral technical talks with the USSR at an early date after appropriate consultation with our Allies. Consideration will be given to having another round of technical talks this year as a basis for preparing for subsequent exploratory talks, perhaps as early as Spring of next year, about possible approaches to reconciling nuclear excavations with the Limited Test Ban Treaty.

DR. SEABORG explained that the AEC data to establish criteria for acceptable levels of radioactivity must be followed by much broader studies for government-wide understanding of criteria for use in amendment of the LTBT.

MR. RICHARDSON, referring to a previous question by Mr. Packard, stated that more information was needed on the importance of the excavation tests, the political risks involved, and the impetus of this on a total test ban.

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GENERAL WHEELER expressed concern, as did Mr. Smith, that efforts to obtain an amendment to the LTBT would lead to opening the question of a complete test ban treaty with a clause for peaceful uses of nuclear explosions. This would be anathema to the Joint Chiefs of Staff.

MR. RICHARDSON observed that other similar PLOWSHARE projects of other countries also require amendment of the LTBT although, as Dr. Seaborg stated, the Soviet Union does not worry about it in their large (land-mass) country. He posed the question for further study; do we want to start amending the treaty and get pressures to go to a complete test ban treaty?

DR. SEABORG suggested that the further study also include the effect of Article V of the Nonproliferation Treaty on the LTBT with many small countries looking to the United States for assistance in PLOWSHARE-type projects (Brazil, Japan, Australia, Israel, etc).

MR. RICHARDSON indicated that a memorandum of the sense of this meeting would be sent to members of the Committee.

Attachment  
AEC Table

*M. C. Demler*  
M. C. DEMLER  
Major General, USAF  
Special Assistant to the  
JCS for Arms Control

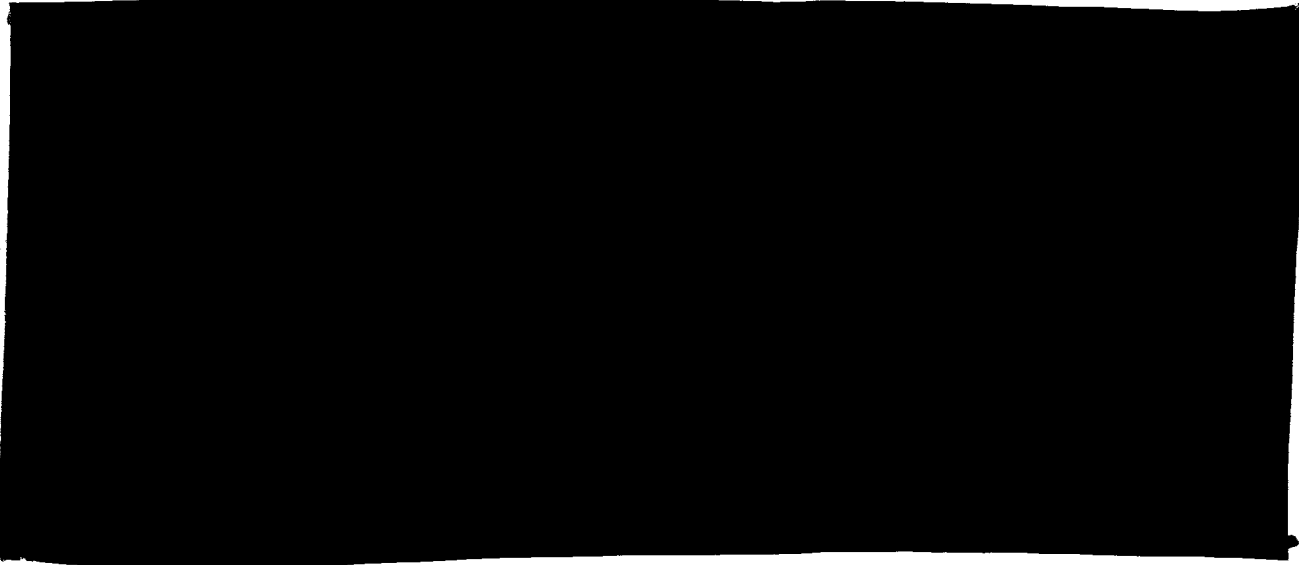
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